

**REMARKS**

Claims 1-13 are pending, of which claims 1, 5, 9, and 12 have been amended.

Reconsideration of the application is respectfully requested for the following reasons for the following reasons.

**I. The Rejection under 35 USC § 112, First Paragraph.**

In the Office Action, claims 1, 2, 4-6, 8, 9, and 11-13 were rejected under 35 U.S.C. § 112, first paragraph, on grounds that the specification fails to provide a written description of the phrase “wherein the modulated MODEM signal is generated independently from the RF signal.” (Emphasis added). Applicants traverse this rejection for the following reasons.

Generation of a MODEM signal “independently from” an RF signal is evident both from the specification and the drawings. By way of example, in the drawings Figure 1 shows a conventional fiber-optic repeating system including a master repeater 2 and a slave repeater 3. The master repeater combines an RF signal from base station 1 and a MODEM signal from block 22 for transmission. (See, for example, page 2, lines 5-19, and page 4, lines 1-5.) The specification and drawings, therefore, make clear that the MODEM signal from block 22 is generated depending on the level of the RF signal output from amplifier 20.

In contrast, the claimed invention generates its MODEM signal independently from the RF signal received from base station 1. This is evident, for example, by comparing Figure 1 to Figure 2. Figure 2 shows that no signal line connection exists between the output of

amplifier 20 and master repeater controller 21. Instead, block 22 outputs a modulated MODEM signal of a predetermined level. Because the MODEM signal of the claimed invention is based on a predetermined level which is not in any way associated with the level of the RF signal, the specification supports the phrase “wherein the modulated MODEM signal is generated independently from the RF signal” as recited in the claims. (See page 8, lines 19-24, and page 9, lines 10-16, for additional support).

These same portions of the specification provide support for the remaining claims that contain the objected-to phrase.

Because the specification provides a written description of all the features recited in the claims, it is respectfully submitted that the § 112, first paragraph, rejection is improper and should be withdrawn.

## **II. The Rejection under 35 USC § 103(a).**

The Examiner rejected claims 1, 2, 4-6, 8, 9, and 11-13 under 35 U.S.C. § 103(a) for being obvious in view of the Farber and Okubo patents and the newly recited Javitt patent. This rejection is respectfully traversed for the following reasons.

In rejecting the aforementioned claims, the Examiner relied on the Javitt patent to supply the feature that the “modulated MODEM signal is generated independently from the RF signal.” However, claim 1 has been amended to recite the following features: “determining whether a control signal of a base station has been received; outputting a

locally generated modulated MODEM signal at a predetermined level based on whether the control signal of the base station has been received, and if the control signal has been received outputting the MODEM signal at a level different from said predetermined level.”

Support for the determining and outputting steps of claim 1 may be found, for example, on page 8, lines 16-24, and page 9, lines 10-16, where the specification indicates that master repeater controller 21 receives and transmits a control signal of base station 1 and that modem 22 outputs a MODEM signal of a constant or predetermined level unless the master repeater controller transmits a control signal of the base station. The specification also indicates that the MODEM signal of the predetermined level is mixed with the RF signal only if the control signal is not received.

The Farber, Okubo, and Javitt patents do not teach or suggest the features added by amendment to claim 1. Specifically, claim 1 recites a condition to the mixing step, i.e., “if the control signal has not been received, mixing from a master repeater the locally generated modulated MODEM signal of said predetermined level with a RF signal and transmitting the mixed signal through an optical cable.” The cited references do not teach or suggest, either alone or in combination, mixing a MODEM signal and RF signal based on the condition of whether a control signal of a base station has been received, for example, by a master repeater.

Claim 1 further recites comparing, in a slave repeater, the detected MODEM signal level with a reference level, and that “the reference level corresponds to said predetermined level *unless the master repeater transmits the control signal of the base station.*” The cited references do not teach or suggest these features.

Based on the foregoing differences, it is respectfully submitted that claim 1 and its dependent claims are non-obvious and this patentable over a Farber-Okubo-Javitt combination.

Claims 5 and 9 recite features similar to those which patentably distinguish claim 1 from the cited combination. Accordingly, Applicants submit that these claims and their dependent claims are allowable.

Claim 12 recites a master repeater configured to receive an RF signal and “generate a modulated reference signal having a level determined based on whether a control signal of a base station is received, wherein the reference signal has a predetermined level if the control signal is not received and has a level different from said predetermined level if the control signal is received.” Claim 12 further recites a slave repeater which compares a received modulated signal to a reference value “corresponding to said predetermined level unless the master repeater received the control signal of the base station.” The cited references also fail to teach or suggest these features. (See above for exemplary passages of support).

The Farber, Okubo, and Javitt patents do not teach or suggest a master repeater of this type. Based on at least the foregoing differences, it is respectfully submitted that claim 12 and its dependent claim is allowable over the cited references.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of the application is respectfully solicited.

To the extent necessary, Applicants petition for an extension of time under 37 C.F.R. § 1.136. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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